

RUTLEY'S ELEMENTS OF MINERALOGY

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ELEMENTS OF MINERALOGY

INTRODUCTORY

THE NATURE OF MINERALS

The Mineral Kingdom.—It has long been the custom to divide nature into three great departments, the animal, vegetable and mineral kingdoms. The mineral kingdom comprises the materials that make the crust of the earth and a part of this kingdom is dealt with in the science of mineralogy. Whether or not any definite boundaries exist between the three kingdoms is a subject which remains to be investigated.

The different members of the animal and vegetable kingdoms are characterised by the development of special organs, or of certain peculiarities of structure, by means of which they pass through a series of changes known as life and growth. This latter phenomenon takes place by the absorption of various kinds of matter which then undergoes conversion by chemical processes into substances similar to those making the plant or animal. In this way the waste which accompanies life is replaced. The bones and shells of animals consist to a great extent of mineral matter. Plants are capable of deriving earthy substances from the soil in which they grow. But mineral matter which has thus been utilised by organisms passes, in the rigid interpretation of the term, beyond the pale of mineralogy, for it assumes a structure, governed by the nature and requirements of the animal or plant, that it would not possess as an ordinary portion of the earth's crust. For example, a pearl would be regarded as an organic substance and not a